

IN THE CLAIMS

A marked up version of the claims as amended is set forth below.

Please amend the claims as follows:

1. (Currently amended) A spark plug having ~~at least one~~ a plurality of electrodes each connected in series with a resistor, the resistors having low enough resistance such that pre-ionization current flows through its respective electrode without significantly changing a voltage applied to the electrode and resistor, the resistance being high enough that the voltage change on the electrode is substantial once a gap defined by the electrode is ionized wherein the plurality of electrodes are arranged to form a series of gaps, the size of each gap being adjusted to facilitate ionization current flow to occur one after the other between the series of gaps, the gaps being one-third to two-thirds an optimum gap distance for a single gap.

2-4 (Cancelled)

5. (Currently amended) A spark plug comprising:
a first and a second main electrode, spaced-apart by a distance N, each electrode for receiving a different potential; and
a plurality of secondary electrodes, disposed between the main electrodes, each having a gap between one another and the main electrodes, each gap being different from one another, the sum of the gaps being equal to the distance N, each gap having a gap distance between one-third to two-thirds the optimum gap distance for a single gap.

6. (Cancelled)

7. (Currently amended) The spark plug defined by claim [[6]] 5, wherein one of the main electrodes is disposed through the center of the spark plug, and wherein the resistors are connected between the center of the spark plug and each of the secondary electrodes.

8. (Currently amended) The spark plug defined by claim [[6]] 5, wherein one of the main electrodes comprises an outer threaded cylindrical housing, and wherein the resistors are connected between each of the secondary electrodes and the outer member.

9. (Cancelled)

10. (Currently amended) A spark plug comprising:

- a main electrode;

- a plurality of secondary electrodes, each having a gap from one another, with a first of the secondary electrodes having a first gap with the main electrode where all the gaps are between one-third to two-thirds an optimum gap distance for a single gap; and

- a plurality of resistors each coupled between a common node and one of the secondary electrodes.

11. (Original) The spark plug defined by claim 10, wherein the main electrode is part of an outer cylindrical housing.

12. (Original) The spark plug defined by claim 11, wherein the secondary electrodes are mounted on a generally coplanar surface.

13. (Original) The spark plug defined by claim 12, wherein the secondary electrodes are linearly aligned.

14. (Cancelled)

15. (Original) The spark plug defined by claim 10, wherein the main electrode is coupled to a ground potential, and the common node is coupled to a high potential.

16. (Original) The spark plug defined by claim 15, wherein each of the gaps is different from one another.

17. (Original) The spark plug defined by claim 16, wherein the secondary electrodes are arranged in a linear configuration.

18. (Currently amended) A spark plug comprising:

 a first and a second electrode defining a first gap;

 a third and fourth electrode defining a second gap, the first and second gaps near traversing one another, the second gap being smaller than the first gap;

 the first electrode and third electrode being coupled to a first node, the third electrode being coupled to a first resistor to the first node;

 the second electrode and fourth electrode being coupled to a second node; and

 the fourth electrode being coupled to a second resistor to the second node, whereby the arcing at the second gap causes the first gap to arc.

19. (Cancelled)

20. (Currently amended) The spark plug defined by claim 18, including a fifth and sixth electrode defining a third gap, the third gap being generally spaced-apart and parallel to the second gap, and ~~intersecting~~ traversing the first gap, the third being smaller than the first gap.

21. (Cancelled)

22. (Currently amended) A spark plug comprising:

a first electrode;

a plurality of second electrodes, each having a gap with a first electrode, each of the gaps having approximately the same distance from the first electrode, and each having a clear path to the first electrode;

a plurality of resistors, each connecting one of the second electrodes to a common node, the resistors each having sufficient resistance such that once its respective electrode arcs, the voltage to that electrode drops, allowing the others of the electrodes to arc.

23. (Original) The spark plug of claim 22, wherein the first electrode is coupled to an outer member of the spark plug, and wherein the common node is coupled to a high voltage.

24. (Cancelled)